

CIRCULAR DNA VECTORS FOR SYNTHESIS OF RNA AND DNA

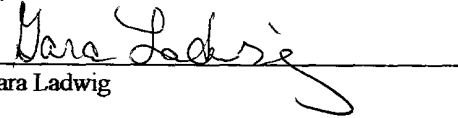
Abstract of the Disclosure

The present invention provides methods for synthesis and therapeutic
5 use of DNA and RNA oligonucleotides and analogs. RNA oligonucleotides are
synthesized using a small, circular DNA template which lacks an RNA polymerase
promoter sequence. The RNA synthesis is performed by combining a circular
single-stranded oligonucleotide template with an effective RNA polymerase and at
least two types of ribonucleotide triphosphate to form an RNA oligonucleotide
10 multimer comprising multiple copies of the desired RNA oligonucleotide sequence.
Preferably, the RNA oligonucleotide multimer is cleaved to produce RNA
oligonucleotides having well-defined ends. Preferred RNA oligonucleotide
multimers contain ribozymes capable of both *cis* (autolytic) and *trans* cleavage.

"Express Mail" mailing label number EL888272365US

Date of Deposit November 30, 2001

I hereby certify that this paper and/or fee is/are being deposited
with the United States Postal Service "Express Mail Post Office
to Addressee" service under 37 C.F.R. 1.10 on the date indicated
above and is addressed to the U.S. Patent and Trademark Office,
Attn: Box PATENT APPLICATION, P.O. Box 2327,
Arlington, VA 22202.


Name: Gara Ladwig